This is the accepted version of the following article: Vanhove, Jan. 2017. The influence of Standard and substandard Dutch on gender assignment in second language German. *Language Learning*, advance on-line publication, which has been published in final form at http://dx.doi.org/10.1111/lang.12230.

The influence of Standard and substandard Dutch on gender assignment in second language German

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Author Note

I thank Raphael Berthele, Gunther De Vogelaer, Scott Jarvis, and three anonymous *LL* reviewers for their helpful comments. The design and analyses of this study were preregistered; the preregistration can be found alongside the data, R code, materials and appendices at the Open Science Framework, https://osf.io/5ahzj/.

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Abstract

This study investigated how standard and substandard varieties of first language (L1) Dutch affect grammatical gender assignments to nouns in second language (L2) German. While German distinguishes between masculine, feminine, and neuter gender, the masculine–feminine distinction has nearly disappeared in Standard Dutch. Many substandard Belgian Dutch varieties, however, still mark this distinction, making them more akin to German than Standard Dutch in this respect. Seventy-one Belgian and 104 Netherlandic speakers of Dutch with varying levels of German proficiency assigned gender-marked German articles to German nouns with Dutch cognates; these gender assignments were then compared to the cognates' gender in the standard and substandard L1 varieties. While the gender assignments of both Belgian and Dutch participants were strongly influenced by the cognates' Standard Dutch gender, the Belgians' responses showed, at best, weak traces of the masculine–feminine distinction in substandard Belgian Dutch. Possible reasons for this weak substandard variety influence are discussed.

Keywords: grammatical gender, closely related languages, cognates, substandard varieties, Dutch, German

The influence of Standard and substandard Dutch on gender assignment in L2 German

How do substandard varieties of the first language (L1) influence the learning of a second language (L2)? This is the overarching question that I address here. But, whereas most research on crosslinguistic influence from substandard varieties focuses on the effects of L1 dialects on L2 pronunciation and phonemic perception (e.g., Broselow, 1992; James, 1983; Karpf, Ketteman, & Viereck, 1980; O'Brien & Smith, 2010), this study concerns a grammatical phenomenon: gender. More specifically, I investigated whether the grammatical gender of nouns in substandard varieties of Belgian Dutch affects which gender-marked article speakers of such varieties assign to the cognates of these nouns in a closely related L2—German. As I will explain in more detail below, many substandard varieties of Belgian Dutch have a three-gender system (masculine, feminine, neuter) that would seem to map more closely onto the L2 German gender system than does the Standard Dutch system, with its two-way common versus neuter distinction.

More broadly, the current study contributes to our understanding of how crosslinguistic similarities affect language learning. Making use of crosslinguistic similarities, such as cognate relationships, is considered crucial to efficient language learning (e.g., Carton, 1971). Closely related languages in particular abound in such similarities, and by and large, knowledge of a language closely related to the new language facilitates learning (e.g., Schepens, van der Slik, & van Hout, 2016). Correspondingly, crosslinguistic similarities and learners' sense of how languages are related to one another—that is, their psychotypology (Kellerman, 1983)—play a central role in current theories of language learning (e.g., Pajak, Fine, Kleinschmidt, & Jaeger, 2016; Rothman, 2015). The present study did not set out to test these theories, but it may inform them, to the extent that it elucidates the role of variation within the L1 in language learning. Before turning to the specifics of the present study, I first

provide a brief overview of research on crosslinguistic influence in L2 gender learning and on crosslinguistic influence originating from substandard varieties.

Cross-Linguistic Influence in L2 Gender Learning

Grammatical gender is notoriously difficult to master in a L2 (e.g., Dewaele & Véronique, 2001; Rogers, 1987; Unsworth, 2008), but it may be easier if the L1 also has grammatical gender. Sabourin, Stowe, and de Haan (2006) compared how well speakers of German, English, and Romance languages could assign the correct grammatical gender to nouns in L2 Dutch. Standard Dutch has a two-way gender system that distinguishes neuter from common nouns, with common gender being the result of a historical merger of feminine and masculine gender. The Romance languages also have two-way gender systems, but these distinguish between feminine and masculine gender. German, by contrast, has a three-way gender distinction that, like earlier stages of Dutch, distinguishes between feminine, masculine, and neuter gender. The German gender system, then, is compatible with the Dutch system in that the German feminine and masculine genders correspond to present-day Dutch common gender and German neuter gender corresponds to Dutch neuter gender. English, finally, lacks grammatical gender entirely. Sabourin et al.'s study showed that English speakers performed worst on Dutch gender assignment and German speakers performed best, suggesting that having a grammatical gender in the L1 facilitates L2 gender assignment, especially if the L1 and L2 gender systems are compatible. These results contrast with those reported by White, Valenzuela, Kozlowska-MacGregor, and Leung (2004), who did not find any such differences between L1 English and L1 French learners with respect to the production and interpretation of L2 Spanish gender marking.

Sabourin et al.'s (2006) and White et al.'s (2004) findings concern similarities between L1 and L2 gender systems. Other studies, however, have investigated whether

crosslinguistic effects in L2 gender assignment and processing occur at the word level: Does it matter whether the L2 word's gender is congruent to that of its L1 translation equivalent? Costa, Kovacic, Franck, and Caramazza (2003) did not find such a gender congruency effect on picture-naming latencies in L2 Italian, Spanish, or French for highly accomplished bilinguals. In a study with advanced Greek learners of German, Salamoura and Williams (2007) did observe a gender congruency effect on picture-naming latencies when participants were asked to use gender-marked L2 noun phrases. Similarly, Lemhöfer, Spalek, and Schriefers (2008) observed L1 German–L2 Dutch gender congruency effects on L2 picture naming latencies as well as on associated error rates. These congruency effects were particularly pronounced for cognates, that is, historically related words that often bear some formal similarity (e.g., Flügel–vleugel "wing" in German and Dutch, respectively). Lemhöfer et al. (2008) also observed a congruency effect in a L2 lexical decision task, but only for cognates. In a follow-up study, Lemhöfer, Schriefers and Hanique (2010) found that German learners of Dutch were more accurate and more confident when assigning gender-marked definite articles to Dutch nouns with gender-congruent German translations, as compared to nouns with gender-incongruent translations. This difference was especially pronounced for cognates, suggesting that German-speaking learners of Dutch transfer German gender to Dutch nouns, particularly if they note a formal similarity between the Dutch noun and its German translation.

To summarize, word-level gender congruency effects in production and comprehension are not consistently observed crosslinguistically, but research with Germanic L2s indicates that learners tend to transfer L1 gender to L2 nouns. Furthermore, Lemhöfer et al.'s (2008) and Lemhöfer et al.'s (2010) findings suggest that this transfer tendency is more pronounced for cognates in closely related languages.

However, these studies—entirely reasonably given their aims—relied on participants with extensive experience in the L2. This raises the question of whether such transfer can be observed across a wider range of L2 proficiency levels. While it seems intuitively likely that learners at lower proficiency levels show greater reliance on their L1, it is also possible that the tendency to transfer develops as the result of learners' noticing that many L2–L1 cognates have the same gender and their assuming that the pattern they have perceived holds more generally; for more on the role of assumed similarities in language learning and their relation to perceived similarities, see Ringbom (2007).

Lastly, and most importantly for this research, the studies discussed previously all investigated influence from and on L1 and L2 standard varieties. This leaves open the possibility that the patterns observed are due in part to the participants' explicit knowledge about gender categories in the L1 standard (e.g., that German words taking das as the definite determiner are neuter, as are Dutch words taking het). However, due to lack of schooling in substandard varieties, knowledge about gender categories in such varieties may be less explicit. Bardel and Falk (2012) and Falk, Lindqvist, and Bardel (2015) suggested that a L2 may become the preferred transfer source in L3 acquisition because learners have more explicit (declarative) knowledge about it than about their L1. In a similar vein, the L1 standard may take precedence over L1 substandard varieties as a transfer source in L2 gender assignments if learners have more explicit knowledge of the standard variety. Another possibility is that such transfer tendencies are affected by sociolinguistic markedness—substandard characteristics may be assumed to be less suitable for transfer (e.g., James, 1983). In light of these predictions, therefore, it was important to investigate the transfer of grammatical gender between closely related languages by learners of different proficiency

levels and with knowledge of substandard L1 varieties. The next section provides a selective overview of how knowledge of substandard varieties can affect language learning more generally.

Crosslinguistic Influence From Substandard Varieties

As noted in the introduction, most research that investigates crosslinguistic influence from substandard varieties focuses on L1 dialect effects on L2 pronunciation and on the perception of L2 phonemic contrasts. Substandard influence is, however, also sometimes observed in L2 morphosyntax (Yiakoumetti & Mina, 2011). Furthermore, participants seem to rely on their knowledge of substandard L1 dialects when trying to make sense of words and texts in an unknown but closely related language, that is, in receptive multilingualism: When Vanhove and Berthele (2013) asked Swiss speakers of German to translate words from Germanic languages they did not know into German, some made explicit recourse to lexemes in their Swiss-German dialect. Another example is provided by Gooskens, Kürschner, and van Bezooijen (2011), who found that Dutch participants from the Dutch-German border region—where the dialects are more closely related to Low German—were better at translating spoken Low German words than other Dutch participants. Interestingly, they also found evidence that participants from the border region tended to rely on their knowledge of the dialect primarily when Standard Dutch offered no help; for further discussion about the role of dialects in receptive multilingualism, see Berthele (2008) and Gooskens and Heeringa (2014).

All in all, the role of substandard varieties in L2 learning is comparatively underresearched, especially in domains other than pronunciation. This lack of research is understandable: Substandard dialects and standard languages tend to be morphosyntactically and lexically similar, making it difficult to determine whether any L1 influence stems from

the dialect or the standard. Moreover, when dialects and the standard language diverge more noticeably, the standard may be the more attractive transfer source (cf. Gooskens et al., 2011). Domains that may be more conducive to dialect–L2 transfer, then, may be those where the L1 substandard and the L2 are more similar to each other than the L1 standard is to the L2. The acquisition of grammatical gender in L2 German by speakers of substandard Southern Dutch fits this description.

Grammatical Gender in Substandard Southern Dutch

Research on the acquisition of L2 Dutch grammatical gender generally assumes that Dutch has a two-gender system (common vs. neuter). To German learners, this two-gender system seems to be compatible with their own three-gender system: German learners of Dutch tend to map German masculine and feminine onto Dutch common gender and German neuter onto Dutch neuter (Lemhöfer et al., 2008, 2010). To Dutch learners of German, however, the merger of masculine and feminine to common gender in their L1 may pose greater difficulties: Dutch neuter can still be mapped onto German neuter, but Dutch common gender needs to be split into German masculine and feminine.

While the assumption of a two-gender system is defensible for Standard Northern (Netherlandic) Dutch, it is more problematic for Southern Dutch, which is predominantly spoken in the Flanders region of Belgium. Unlike Northern Dutch varieties, many Southern Dutch dialects have retained the traditional three-way distinction in adnominal gender marking, that is, on determiners and occasionally adjectives. (I will not discuss the rich literature on Dutch pronominal gender and its seemingly haphazard relation to adnominal gender; see De Vogelaer, 2009, for an overview and further references.) This three-way distinction is also commonly attested in supraregional substandard spoken Belgian Dutch,

known as tussentaal “in-between language” (Taeldeman, 2008). Both dialects and tussentaal are here referred to as substandard Southern Dutch.

Table 1 illustrates how most substandard Southern varieties mark grammatical gender adnominally. Most importantly for the present study, the distinction between masculine and feminine nouns is marked on the indefinite article (ne(n) vs. een) and some other determiners not shown here (e.g., masculine diene(n) vs. feminine die). This distinction is reliable in the sense that only masculine nouns can take, for instance, the masculine indefinite article ne(n). In addition, in most varieties, both indefinite and definite masculine determiners as well as adjectives often take –n when they precede a vowel, h, d, t, or b (Plevoets, Speelman, & Geeraerts, 2009; Taeldeman, 1980). It must also be pointed out, however, that the details regarding adnominal gender marking vary between Southern Dutch dialects; see De Schutter, van den Berg, Goeman, and de Jong (2005) and Taeldeman (1980) for overviews. For instance, in the Northern coastal area of West Flanders, adjectives in masculine noun phrases (NPs) take –n before vowels only and not before h, d, t, or b as in many other dialects. Moreover, most West Flemish dialects do not have a separate indefinite masculine article, such as ne(n); instead, the same indefinite article is used for all genders (De Vogelaer & De Sutter, 2011).

[TABLE 1]

The adnominal marking of masculine gender in Southern varieties makes the traditional gender of Dutch nouns more transparent to speakers of Southern Dutch; see De Vogelaer and De Sutter (2011). This is also often reflected in their Standard Dutch usage: More than in Northern Dutch, pronominal gender in Standard Southern Dutch is based on the antecedent's traditional grammatical gender (E-ANS entry at http://ans.ruhosting.nl/e-ans/03/03/03/body.html). Nonetheless, in some dialects, particularly in West Flanders, the

contexts in which masculine and feminine gender are disambiguated adnominally are more restricted, as described above. To speakers of these dialects, the masculine–feminine distinction may be less clear (De Vogelaer & De Sutter, 2011). Overall, though, speakers of Southern Dutch with knowledge of substandard varieties have, in theory, access to an additional guiding principle—the grammatical gender in their substandard variety—for assigning gender to the L2 German counterparts of L1 Dutch common-gender nouns compared to speakers of Northern Dutch.

Aim and Approach

My overarching goal was to investigate whether speakers of Southern Dutch rely on their knowledge of a substandard variety for distinguishing between masculine and feminine gender in L2 German. More specifically, I addressed the following two research questions.

First, across a range of L2 German proficiency levels, does the gender of a noun in the Southern Dutch substandard influence the gender that speakers of Southern Dutch assign to the German cognate of this noun? Here I expected a congruency effect: If a Dutch noun was common gender in Standard Dutch and known to be generally masculine in the Southern substandard, then I hypothesized speakers of Southern Dutch (Belgians) to be more likely to assign masculine gender to the German cognate of this noun relative to speakers of Northern Dutch (i.e., from the Netherlands).1 Similarly, if the noun was generally feminine in the Southern substandard, then I expected Belgian participants to more often assign feminine gender to its German cognate, relative to Dutch participants.

However, the substandard gender of nouns can vary locally within Dutch-speaking Belgium (e.g., De Schutter et al., 2005; Pauwels, 1938), and the extent to which the masculine–feminine distinction is unambiguously marked adnominally varies geographically (see preceding section). Moreover, not all Flemings speak a dialect, and they differ in the

extent to which they use tussentaal features. All these factors were likely to give rise to individual differences in L1 adnominal gender marking even among speakers of Southern Dutch, and such L1 differences could be reflected in differences in L2 German gender assignments. To take those into account, the participants for this study were also asked to judge, for a couple of gender-marked substandard Dutch NPs, whether these were common in colloquial Dutch and to indicate whether they used these NPs themselves. This way, the impact of both receptive knowledge and active use of substandard gender marking on L2 German gender assignments could be assessed as per the second research question: Among speakers of Southern Dutch, do individual differences in L2 gender assignment reflect individual differences in L1 adnominal gender marking with respect to (a) self-reported own use and (b) perceived use judgments, and if so, which of the two is the better predictor of L2 gender assignment?

Survey: Grammatical Gender in Substandard Southern Dutch

To address the two research questions, I needed a set of Dutch words that have German cognates and for which the grammatical gender in substandard Southern Dutch is known. However, earlier Flanders-wide surveys of the gender of nouns in Southern Dutch dialects seemed outdated (e.g., Pauwels, 1938, with data from 1872) or were of otherwise limited use. So, to arrive at a suitable set of Dutch and German stimuli, I conducted an online survey aimed at speakers of Southern Dutch. Full-fledged details about the design and analysis of this survey are presented in online materials at https://osf.io/h4fhu; here I present the main points.

A total of 264 speakers of Southern Dutch were recruited through snowball sampling; Figure 1 shows their geographic distribution. For 75 Dutch singular NPs, they reported whether the gender-marked article could occur with the noun in colloquial Dutch (usual vs.

unusual); 55 of these NPs featured the substandard masculine indefinite article ne or (for nouns starting with a vowel, h, d, t, or b) nen.

[FIGURE 1]

On the basis of the respondents' judgments, the substandard gender of the nouns preceded by ne(n) was established as follows: If more than 75% of the respondents agreed that the article suited the noun, the noun was considered masculine; if more than 75% of the respondents agreed that the article did not suit the noun, the noun was considered feminine. In the remaining cases, that is, when between 25% and 75% of the respondents accepted the masculine-marked NP, the nouns' substandard Southern Dutch gender was considered to be variable. On the basis of these categorizations, the stimulus set for the study on gender assignments in L2 German was constructed.

Method

This study asked native speakers of Dutch from both Belgium and the Netherlands with varying levels of German proficiency to assign gender-marked German definite articles (i.e., masculine der, feminine die, or neuter das) to German nouns with Dutch cognates. Additionally, the participants were asked to judge, for a set of Dutch gender-marked NPs, whether these were commonly used in colloquial Dutch and whether they themselves would use them. The design and analyses for this study were preregistered at https://osf.io/5ahzj; all materials, data sets, and R scripts can also be found at this address.

Tasks and Questionnaire

The online batch of tasks was programmed using the jsPsych library for JavaScript (de Leeuw, 2015) and consisted of five parts: a consent form; a L2 German gender-assignment task with 44 German nouns; a task in which participants judged whether 34 gender-marked NPs were commonly used by speakers of Dutch; a task in which they

indicated, for 14 of these NPs, whether they themselves would use them; and a questionnaire. All instructions were written in Dutch, and all stimuli were presented in written form. Most participants completed the entire batch in under 10 minutes.

L2 German Gender Assignment. In this task, participants were shown 44 written German singular nouns and were asked to assign them a gender-marked German singular nominative definite article: der (masculine), die (feminine), or das (neuter). The words were presented individually and in a random order with the three German articles underneath; the participants could click on what they thought was the correct article. The stimuli are presented in online materials at https://osf.io/5vp86. All had Dutch cognates, with the transparency of the cognate relationship ranging from homography (e.g., Knie–knie "knee") to more discrepant forms (e.g., Tür–deur "door"). All nouns referred to inanimates and were both monosyllabic and monomorphemic, as were their Dutch cognates.

Fifteen of the stimuli were not directly relevant to the two research questions. These were German masculine (6), feminine (4), and neuter (5) nouns, whose cognates were all neuter in both Standard and substandard Dutch. They were included for two reasons. First, they allowed me to assess and take into account the participants' actual knowledge of L2 gender: Participants with no knowledge of German gender would pick the correct article in only about 5 out of 15 cases, be it through random guessing or systematically transferring Dutch neuter gender, whereas only extremely lucky or highly L2-proficient participants would score 15 out of 15. The number of correct responses to these 15 stimuli, then, served as a measure of the participants' knowledge of L2 German gender. Second, by including stimuli with neuter cognates, I could also assess whether the L2 German gender assignments by speakers of Southern and Northern Dutch are affected by the Standard Dutch grammatical gender of the stimuli's cognates. If L2 German gender assignments are affected by L1

Standard Dutch, then both Dutch and Belgian participants should provide more neuter das responses to stimuli with neuter Standard Dutch cognates than to stimuli with common-gender Standard Dutch cognates (see below). In addition to complementing Lemhöfer et al.'s (2008) and Lemhöfer et al.'s (2010) findings on German-to-Dutch transfer, this comparison would help to interpret any findings related to crosslinguistic influence from the substandard: If only weak crosslinguistic influence related to the more obviously marked neuter–common distinction in the standard language is found in this task, then the effect of the less obviously marked substandard masculine–feminine distinction (as discussed above) should, in all likelihood, be even weaker.

The other 29 stimuli had common-gender cognates in Standard Dutch. The survey had suggested that, of these, 13 were masculine in substandard Southern varieties and 8 feminine. Of the remaining eight stimuli, six failed to meet the consistency criterion and were labeled as having variable gender in substandard varieties, and two new stimuli were labeled as having unknown gender in substandard varieties. The stimuli were not perfectly balanced across the different categories as few stimuli fitting all the criteria (inanimate as well as monosyllabic and monomorphemic in German and Dutch) could be found, but this should not be a problem for the analyses.

One crucial difference between this study and those by Costa et al. (2003), Lemhöfer et al. (2008), Lemhöfer et al. (2010), and Salamoura and Williams (2007) is the fact that the congruency between the L1 gender and the correct L2 gender was not an experimental condition in this gender-assignment task. A gender-congruency effect presupposes that L2 gender has already been acquired (possibly imperfectly), and this assumption is debatable in the present study. Rather than making reference to the target L2 gender, this study instead compared gender assignments for the L2 German words to the gender of the L1 Dutch

cognates of these words and investigated whether these assignments show traces of substandard L1 influence. For instance, if Belgian learners, more so than comparable Dutch learners, tend to assign a masculine article to German Boot "boat," this would indicate that Belgian learners transfer their substandard L1 gender to German (boot is masculine in substandard Southern Dutch and common gender in Standard Dutch); the fact that Boot happens to be neuter in German would not affect this conclusion.

It should be noted, furthermore, that gender assignment is not entirely arbitrary for German monomorphemic nouns (Köpcke & Zubin, 1996). To the extent that learners of German know about the systematicity in native German gender assignments (Walter & MacWhinney, 2015), I assume that this knowledge is similar between Dutch and Belgian learners of comparable L2 levels. Similarly, to the extent that any principles for assigning gender to Dutch monomorphemes exist (Durieux, Daelemans, & Gillis, 1999), I assume that both Dutch and Belgian participants have comparable knowledge of them. Any differences between Dutch and Belgian learners, as in the example above, would then be attributable to the influence from the substandard.

Perceived Use of Gender-Marked Dutch NPs. After the L2 German gender-assignment task, the participants were asked to judge, for 34 Dutch gender-marked NPs, whether they commonly occurred in Dutch. This task served three goals. First, it allowed me to verify that Belgian, but not Dutch, participants did indeed have knowledge about the Southern three-gender system. I expected that Dutch participants would not be able to reliably distinguish between permissible and impermissible substandard Southern Dutch NPs, whereas Belgian participants would be. Second, by including cognates of some of the German stimuli tested in the previous task, I could assess, as per the second research question, whether the participants' German gender assignments agreed with what they

believed to be common in their L1. Third, by including both correct and incorrect Standard Dutch NPs, I could identify participants who did not have enough knowledge of Standard Dutch or who were not paying sufficient attention to the task. In principle, all native speakers of Dutch should consistently distinguish between correct and incorrect Standard Dutch. Participants who did not meet a 90% accuracy criterion for Standard Dutch NPs (see below) were excluded from the analyses.

The perceived use task consisted of 34 Dutch NPs that were presented individually and in random order. The participants' task was to indicate where, according to them, these NPs were in common colloquial use: in both the Netherlands and Flanders, in Flanders only, or neither in the Netherlands nor in Flanders. The stimuli, which are provided in the online materials at https://osf.io/5vp86, fell into seven categories:

1. Five correct Standard Dutch NPs with common-gender de (e.g., de koek "the biscuit").
2. Five correct Standard Dutch NPs with neuter het (e.g., het huis "the house").
3. Five incorrect Standard Dutch NPs with common-gender de (e.g., de beeld "the statue"). The correct Standard Dutch definite article for these NPs is het; substandard Southern Dutch varieties would not allow de here either.
4. Five incorrect Standard Dutch NPs with neuter het (e.g., het fiets "the bicycle"). The correct Standard Dutch definite article for these NPs is de; substandard Southern Dutch varieties would not allow het here either.

None of the German counterparts to the nouns in these four categories appeared in the first task. These categories tested the participants' knowledge of Standard Dutch gender marking. Participants responding correctly to fewer than 18 out of 20 stimuli were to be excluded from the analyses (90% accuracy criterion). For categories 1 and 2, the correct

response was “in both the Netherlands and Flanders”; for categories 3 and 4, “neither in the Netherlands nor in Flanders” was considered correct. The three remaining categories were as follows:

5. Three correct substandard Southern Dutch NPs with masculine ne (e.g., ne geur “a smell”).
6. Three incorrect substandard Southern Dutch NPs with masculine ne (e.g., ne mand “a basket”). These three nouns were feminine in the substandard according to the survey; these NPs could not occur in Standard Dutch either.

None of the German counterparts to the nouns in these two categories appeared in the first task. These categories tested the participants’ knowledge of substandard Southern Dutch gender. For category 5, the correct response was “in Flanders only”; for category 6, “neither in the Netherlands nor in Flanders.”

7. Eight substandard Southern Dutch NPs with masculine ne or nen (e.g., ne gloed “a glow” and nen bijl “an axe”).

The German counterparts of the nouns in category 7 did occur in the first task, but their substandard gender was either known to vary within Flanders or was unknown. If a participant responded “in Flanders only” to a stimulus in this category, its gender in “perceived use” was noted as “masculine accepted”; if a participant responded “neither in the Netherlands nor in Flanders,” it was noted as “masculine rejected.” If a participant responded “in both the Netherlands and in Flanders,” this response was not included in the analyses.

Self-Reported Use of Gender-Marked Dutch NPs. The 14 NPs from categories 5–7 from the previous task were shown again; this time, participants were asked whether they themselves used these NPs in informal settings. If they responded “yes,” the “own use”

gender for the noun in question was noted as "masculine accepted"; if they responded "no," it was noted as "masculine rejected."

Questionnaire. The questionnaire items pertained to the participants' native language(s), the country and municipality in which they were predominantly raised, whether and how often they spoke a dialect and (for Belgian participants) tussentaal, whether they ever took German classes, and their age and gender. The participants were also asked which of seven can-do descriptions best summarized their conversational abilities in German (corresponding to the A1–C2 Common European Framework of Reference for Languages levels as well as one "no ability" description).

Participants

The participants were recruited through contact persons at Belgian and Dutch universities. Task and questionnaire data were available for 199 respondents. Twenty-three of them were dropped for not considering Dutch to be one of their native languages (5), for not having grown up in Belgium or the Netherlands (3), for considering themselves bilingual in German (1), or for responding correctly to fewer than 18 out of 20 Standard Dutch stimuli in the perceived use task (15). This resulted in a sample of 71 Belgian and 104 Dutch participants. Table 2 provides key descriptive participant statistics.

[TABLE 2]

Panels A and B of Figure 2 compare Belgian and Dutch participants on their self-assessed conversational skills in German and the number of correct gender assignments for German nouns with neuter Dutch cognates. Whereas Dutch participants tended to rate their conversational ability higher than Belgian participants, knowledge of L2 German gender seemed to be comparable in the Belgian and Dutch groups.

[FIGURE 2]

Panel C shows the number of correct responses for substandard Southern Dutch NPs in the perceived use task. Clearly, Belgian participants had better knowledge of gender assignments in the Southern substandard than Dutch participants, only 10 of whom scored better than 3 out of 6.2 That said, a substantial number of Belgian participants failed to reliably distinguish between correct and incorrect substandard NPs. Figure 3 suggests that it is participants hailing from the province of West Flanders (around Bruges), in particular, who did not distinguish between correct and incorrect ne-NPs. This is in line with findings from dialectology (De Vogelaer & De Sutter, 2011), as discussed previously.

[FIGURE 3]

Results

IIn the following sections, I first report on the analyses that were preregistered. For these analyses, responses with latencies faster than 500 milliseconds were excluded from the analyses as possible misclicks; less than 1% of the data was lost as a result.

As Figures 2 and 3 show, however, 25 Belgians scored less than 3 out of 6 on knowledge of substandard Southern gender marking, which suggests that they may not have the knowledge of substandard Southern gender that I assumed Belgian speakers of Dutch to have. Moreover, 10 Dutch participants scored more than 3 out of 6 in this task, suggesting they may have the knowledge of substandard Southern gender that I assumed Dutch participants not to have. I will therefore also report on nonpreregistered follow-up analyses from which these participants were excluded.

Influence of Standard Dutch Gender on L2 Gender Assignments

If L2 German gender assignments are affected by the gender of the cognates in Standard Dutch, then we would expect more neuter article choices (das) if the cognates are neuter in Standard Dutch and more masculine (der) or feminine (die) article choices if they

are common gender. Figure 4 shows that this is indeed what was found: Regardless of whether the participants were Belgian or Dutch and irrespective of the nouns' actual gender in German, neuter das was a much more popular choice when the nouns' cognates are neuter in Standard Dutch, whereas der and die were the more popular choices when they are common gender.

[FIGURE 4]

Figure 5 shows what proportion of the participants assigned neuter das to each German noun. Not only was there a greater tendency to assign das to nouns with neuter cognates than to those with common-gender cognates, the distributions hardly overlapped.3 The sole exception was Boot (Dutch boot "boat"), to which the majority of the participants correctly assigned neuter das. This is presumably owing to the critically acclaimed 1981 film Das Boot.

[FIGURE 5]

Influence of Substandard Southern Dutch

For the first research question, which asked if German gender assignments by speakers of Southern Dutch was influenced by the gender of the German nouns' cognates in the Southern Dutch substandard, only the 21 nouns with cognates that were known from the survey to have masculine or feminine gender in substandard Southern Dutch were considered. If the substandard L1 gender affects L2 gender assignments by Belgian speakers of Dutch, then we would expect Belgians to pick masculine der and feminine die more often for nouns with masculine and feminine cognates, respectively, as compared to Dutch participants. The upper panel of Figure 6 shows that, overall, Belgians did indeed tend to pick die more for nouns with feminine cognates and der for nouns with masculine cognates, but compared to the effects found in Figure 4, the effect was small. The flat lines in the bottom

panel suggest that the responses of Dutch participants hardly covaried with the substandard gender, which is what one would expect because the vast majority of these participants do not have this distinction in their L1.

[FIGURE 6]

Figure 7 shows, for each noun, the proportion of Belgian and Dutch participants who assigned the same gender to the noun as its substandard cognate. If the Belgians' responses are affected by the substandard gender, then the circles should generally lie to the right of the crosses. This was clearly not the case. In fact, it seems that the patterns that hinted at a congruency effect in Figure 6 were driven mostly by two nouns: Stern "star" and Fleck "stain."

[FIGURE 7]

These comparisons are complicated somewhat by the participants' actual knowledge of German: For words such as Tür (feminine, Dutch deur "door") and Berg (masculine, berg "mountain"), the correct German gender is the same as their cognates' substandard gender. For words such as Fleck (masculine, vlek "stain") and Nacht (feminine, nacht "night"), the gender is different in both languages. This means that participants with a good mastery of L2 German gender will tend to produce congruent responses for Tür and Berg and incongruent responses for Fleck and Nacht. To take such effect of L2 gender knowledge into account, I included the number of correct L2 gender assignments that the participants provided to the 15 stimuli with neuter cognates (see Figure 2) as a covariate when running the inferential test. This tally was first centered at its sample median and was then multiplied by −1 when the L2 and L1 substandard genders did not agree (e.g., for Fleck and Nacht) to take into account the fact that L2 knowledge should lead to more congruent responses when the genders agree but to fewer when they do not.

The inferential test was run using the 3,673 responses, which were coded as congruent or incongruent with the substandard Southern gender, as the outcome variable in a logistic mixed-effects model. This model had random intercepts for stimuli and participants as well as both a fixed effect and a by-stimulus random slope for the L2 gender knowledge score described above. Finally, country (the Netherlands vs. Belgium; coded as −0.5 and 0.5, respectively) was included both as a fixed effect and as a by-stimulus random slope; if Belgians were more likely to provide congruent responses, then this fixed effect should be positive. A likelihood-ratio test for the fixed effect for country confirmed the impression gleaned from Figures 6 and 7: Belgians were not significantly more likely to provide substandard-congruent responses than Dutch participants, $\chi^2_{LRT}(1) = 0.3$, $p = 0.57$, $\beta \pm SE$: 0.05 ± 0.09.

Lastly, I conducted some nonpreregistered alternative analyses, the purpose of which was to verify if similar inferential results would be obtained in what I consider to be reasonable, alternative specifications. These alternative analyses included (a) dropping the 25 Belgians who scored less than 4 out of 6 on L1 substandard gender knowledge as well as the 10 Dutch participants who scored 4 out of 6 or more (see Figure 2), (b) allowing the effect of L2 gender knowledge on congruency to be nonlinear, and (c) excluding responses to the outlying stimulus Boot. None of these analyses returned a significant difference in substandard-congruent responses between Belgian and Dutch participants (see the online materials at https://osf.io/3bqyt). In sum, the present data did not speak to an influence of Belgian participants' knowledge of substandard Southern Dutch gender on their gender assignments in L2 German.

The Role of Individual L1 Differences

The substandard Southern gender of the cognates used for the first research question was established by means of an external survey. As the numbers in the online materials available at https://osf.io/5vp86 show, however, not all survey respondents shared the same intuitions about usual masculine NPs, such as nen boom (German Baum, masculine, "tree") or ne ster (Stern, masculine, "star"). Categorizing the Dutch cognates as feminine or masculine in the substandard therefore glosses over interindividual variation in L1 gender intuitions, and ideally, the L2 responses are compared to the L1 intuitions of the same participants. To that end, for the second research question, I compared the participants' L2 German gender assignments for eight nouns to their judgments about gender-marked NPs with cognates of the same nouns. These nouns were either known from the survey to have variable gender in Southern substandard varieties or had not been included in the survey, and the participants were asked where the NPs were usual (in both the Netherlands and Flanders, in Flanders only, or nowhere) and whether they used the NPs themselves.

Sure enough, the responses to both of these questions overlapped to some degree: When Belgians reported using masculine NPs, such as ne gloed (Glut, feminine, "glow"), themselves (230 responses), they frequently (90%) perceived such masculine NPs to be usual in Flanders. Nonetheless, even when they claimed not to use such NPs themselves (324 responses), they still considered them usual in colloquial Southern Dutch a substantial proportion of the time (46%). As for the Dutch participants, they overwhelmingly reported not to use these Southern NPs (752 out of 783 responses, 96%), but still believed them to be usual in Flanders (559 responses, 71%). This, however, is more a matter of many Dutch participants assuming that any noun can take ne in Flanders than a matter of them being

attuned to the masculine–feminine distinction. For the following analyses, then, I only considered the responses of Belgian participants.

If crosslinguistic influence from active use of the substandard were at play, we would expect Belgian participants that report to use masculine NPs such as ne kin to assign masculine der to the German noun Kinn (neuter, "chin") more often than participants who report not to use ne kin. Similarly, if receptive knowledge of substandard Southern gender is at play, we would expect Belgian participants who believe the masculine NP ne kin to be usual in colloquial Flemish usage to assign the masculine German article der to Kinn more often than Belgian participants who believe ne kin to be unusual.

Figure 8 shows, for each of the eight stimuli, how differences in the self-reported L1 use of masculine-marked NPs covary with differences in L2 gender assignment. What we would expect to find is that the lines connecting the triangles representing the masculine der responses point upward, but this was not what was generally found—the large differences for Stadt (feminine, "city") and Knie (neuter, "knee") notwithstanding. The inferential test was run using the 554 L2 gender assignments that were coded as masculine (der) or not masculine (die, das) as the outcome variable in a logistic mixed-effects model. This model had random intercepts for stimuli and participants as well as both a fixed effect and by-stimulus and by-participant random slopes for whether the participant reported to use the cognate L1 gender-marked NP (no vs. yes; coded as −0.5 and 0.5, respectively). A likelihood-ratio test confirmed the visual impression from Figure 8: The proportion of der responses was not significantly higher when the participants claimed to use the cognate ne NP, $\chi^2_{LRT}(1) = 2.2$, $p = 0.14$, $\beta \pm$ SE: 0.4 ± 0.3.

[FIGURE 8]

Turning to crosslinguistic influence from receptive knowledge of substandard Southern gender, Figure 9 shows how the participants' L2 gender assignments covaried with whether they considered the cognate gender-marked NPs to be usual in colloquial Southern Dutch usage. Again, participants who believe the cognate ne NPs to be usual did not provide consistently more der assignments: they did for four nouns (Stadt "city," Kinn "chin," Knie "knee," Beil "axe"), but not for four others (Pflicht "duty," Saal "hall," Frucht "fruit," Glut "glow"). An inference test similar to the one for self-reported L1 use (561 responses) produced a highly similar result: Participants were not significantly more likely to respond der if they believed the cognate ne NPs to be usual in colloquial Southern Dutch, $\chi^2_{LRT}(1) = 1.2$, $p = 0.28$, $\beta \pm SE$: 0.3 ± 0.3.

[FIGURE 9]

It is only in nonpreregistered analyses for which only the 46 Belgian participants who scored more than 3 out of 6 on L1 substandard Southern Dutch gender knowledge were retained that the effect of self-reported own use was significant, $\chi^2_{LRT}(1) = 5.5$, $p = 0.02$, $\beta = 0.9 \pm 0.4$; as the map in Figure 3 shows, it was mostly West Flemings that were discarded for this analysis. Figure 10 shows the corresponding article choices for each noun. Parallel analyses for the effects of perceived use did not yield significant results, whether they statistically controlled for L2 gender knowledge or not (see https://osf.io/3bqyt). Given that neither "own use" nor "perceived use" robustly predicted L2 gender assignments, the question as to which of the two is the better predictor is moot.

[FIGURE 10]

Discussion

I set out to investigate how the grammatical gender of nouns in Standard and substandard Dutch affects gender assignments in L2 German. The gender of nouns in

Standard Dutch (common vs. neuter) seems to strongly affect gender assignments for the corresponding cognates in L2 German in Dutch and Belgian participants alike. This finding complements those by Lemhöfer et al. (2008) and Lemhöfer et al. (2010), who studied gender-congruency effects in Germans with L2 Dutch.

By contrast, substandard Southern (Belgian) varieties, which like German also distinguish between masculine and feminine gender, hardly seem to influence L2 German gender assignments. It is only in post hoc analyses for one research question (self-reported use), for which mostly West Flemings were excluded, that I found evidence for substandard transfer. While these analyses may make sense in hindsight—adnominal gender marking is more ambiguous in West Flemish dialects than in East Flemish (around Ghent) and Brabantine (around Antwerp and Brussels) dialects (see "Grammatical Gender in Substandard Southern Dutch" above)—their results are best taken with a grain of salt, and it would be best to verify them in a new study that specifically targets speakers of East Flemish or Brabantine varieties. Until such time, I conclude that the evidence for substandard transfer in L2 German gender assignment is meager.

The question, of course, is why. To explain why "not everything that looks transferable is transferable," (p. 113), Kellerman (1983) proposed that the L1 features learners perceive to be "infrequent, irregular, semantically or structurally opaque, or in any other way exceptional" (p. 117) will be less likely to transfer. Particularly the factors of frequency and semantic and structural opacity may be relevant here. First, in regard to frequency, the adnominal marking of the feminine versus masculine distinction is, in effect, optional—Flemings do not need to say nen berg "mountain" every time, as they can use the Standard Dutch article een instead, even in colloquial contexts. Additionally, masculine gender marking is often syncretic with feminine gender marking, especially in definite

contexts. As a result of both of these factors, unambiguously masculine but substandard NPs may be rarer even in spoken Southern Dutch than their Standard Dutch counterparts, which are ambiguous with respect to the masculine–feminine distinction (see the online materials at https://osf.io/dtr2r for corpus data). This relative lack of frequency with which the substandard feminine versus masculine distinction is expressed may make it less likely that learners make recourse to substandard Dutch when assigning gender to L2 German nouns.

Second, from the learners' perspective, there may seem to be neither rhyme nor reason as to why some nouns can take ne(n) in the L1 substandard and others cannot: While they may feel that ne gloed "glow" sounds fine and ne zaal "hall" does not, they may not know that this is due to a masculine versus feminine distinction. This distinction may be particularly opaque due to the seemingly haphazard relation between adnominal and pronominal gender in Dutch (see De Vogelaer, 2009)—even among young dialect speakers (De Vogelaer & De Sutter, 2011), and as a nonstandard feature, it is unlikely to be taught in school. The resultant lack of metalinguistic knowledge may prevent the learners from making the "necessary crosslingual tie-ups" (Kellerman, 1983, p. 114) or "interlingual identification" (Weinreich, 1953, p. 7) between the L1 substandard and the L2 German three-gender systems. This suggestion ties in with Falk et al.'s (2015) finding that learners of L3 Dutch who had higher levels of explicit (declarative) knowledge about L1 Swedish grammar were more likely to adopt L1 Swedish rather than L2 English word order when speaking Dutch (see also Bardel & Falk, 2012). Because I do not have data on the participants' declarative knowledge about gender marking in Standard and substandard Dutch, however, this explanation requires further investigation.

An alternative explanation is that speakers of Southern Dutch do not transfer the gender from their substandard to L2 German because they have learned from experience that

the substandard Southern Dutch gender is not a fully reliable cue to German gender. This, however, seems unlikely given that these participants did transfer Standard Dutch gender, which is not a fully reliable cue to German gender either.

Lastly, from the psychotypology view (Kellerman, 1983; see also Rothman, 2015, and Pajak et al., 2016, for more recent proposals in a similar vein), it may be the case that speakers of Southern Dutch do not transfer their substandard gender because they do not perceive their substandard variety to be close enough to German to be of any use. Such perceptions may largely be subconscious and impossible to capture using, for instance, questionnaires (Rothman), making this explanation difficult to test. That said, Pajak et al., pace Rothman, suggest that these perceptions may be shaped in part by learners' top-down beliefs. If so, it may be possible to experimentally manipulate learners' beliefs through metalinguistic instruction and observe whether this manipulation affects their transfer tendencies.

Conclusion

In sum, even though the three-gender system of substandard Southern (Belgian) varieties of Dutch is structurally similar to that of German, speakers of Southern Dutch do not seem to rely on their knowledge of these varieties when assigning gender to L2 German nouns. By contrast, Standard Dutch, with its structurally less similar two-gender system, does seem to exert a major influence on German gender assignment. Of the explanations that I have put forward, the difference in metalinguistic knowledge about the L1 standard and the substandard and its possible effect on perceptions of linguistic relatedness seem most amenable to empirical investigation.

Notes

[1]At the dialectal level, there is obviously no clean break between Southern and Northern varieties at the Belgo-Dutch border. As such, my equating speakers of Southern Dutch to Belgian speakers of Dutch is mostly a matter of convenience. That said, Netherlandic Dutch and Belgian Dutch underwent different histories of standardization, which are reflected in differences in the vitality of these dialects and the use of supraregional substandard varieties (tussentaal). Nevertheless, in the main text, I assess how much knowledge the participants have of the Southern feature of interest (i.e., grammatical gender).

[2]Preregistered analysis: The binary accuracy data (175 participants × 6 stimuli = 1,050 responses) were fitted in a logistic mixed-effects model with random intercepts for participants and stimuli as well as both a fixed effect and a by-stimulus random slope for country (the Netherlands vs. Belgium, coded as −0.5 and 0.5). A likelihood-ratio test confirms the difference in accuracy between Belgian and Dutch participants ($\chi^2_{LRT}(1) = 16$, $p < 0.001$, $\beta \pm$ SE: 1.4 ± 0.2).

[3]Preregistered analysis: The 7,696 responses (neuter das vs. other) were fitted as the outcome variable in a logistic mixed-effects model with random intercepts for participants and stimuli as well as the cognates' Standard Dutch gender (neuter vs. common; coded as 0.5 and −0.5) as a fixed-effect and a by-participant random slope. A likelihood-ratio test confirms the difference in das choices between nouns with neuter and common cognates ($\chi^2_{LRT}(1) = 54$, $p < 0.001$, $\beta \pm$ SE: 3.2 ± 0.3).

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Tables

Table 1

Adnominal gender marking in Standard Dutch and substandard Southern Dutch for articles and adjectives. The substandard Southern Dutch entry is based on De Vogelaer & De Sutter's (2011) description of East-Flemish.

	Standard Dutch	Substandard Southern Dutch
indefinite / definite article (m.)	een, de	ne(n), de(n)
indefinite / definite article (f.)	een, de	een, de
indefinite / definite article (n.)	een, het	e(en), het
a big dog, the big dog (m.)	een grote hond, de grote hond	ne groten 'ond, de groten 'ond
a big cat, the big cat (f.)	een grote kat, de grote kat	een grote kat, de grote kat
a big horse, the big horse (n.)	een groot paard, het grote paard	e(en) groot paard, het groot paard

Note. m. = masculine, f. = feminine, n. = neuter.

Table 2

Description of the participant sample.

	Belgium (71 participants)	The Netherlands (104 participants)
Percentage men	28%	28%
Age range (years)	18–75	18–76
Median age (years)	21	28.5
Percentage with knowledge of a dialect	44%	24%
Mean ± SD use of *tussentaal* (0–4)	3.0 ± 0.8	(does not apply)
Percentage who took German classes	90%	100%
Mean ± SD L2 German gender knowledge (0–15)	6.8 ± 2.7	7.2 ± 2.1
Mean ± SD L1 substandard Dutch gender knowledge (0–6)	4.3 ± 1.2	2.8 ± 0.8

Note. SD = standard deviation.

Figures

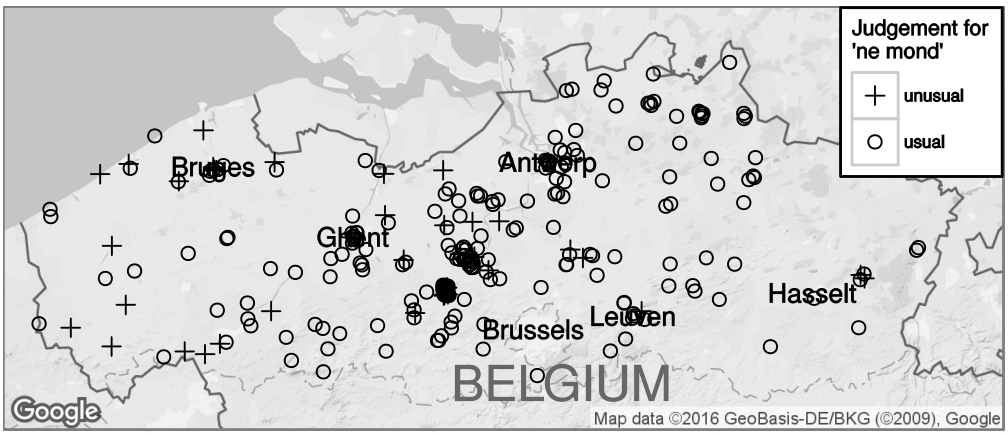

Figure 1. Responses to *ne mond* (‘a mouth’) according to the town where the survey informants grew up. Each circle or cross represents the response from one informant; the position of the symbols was slightly jittered to reduce the amount of overlap between informants that grew up in the same town.

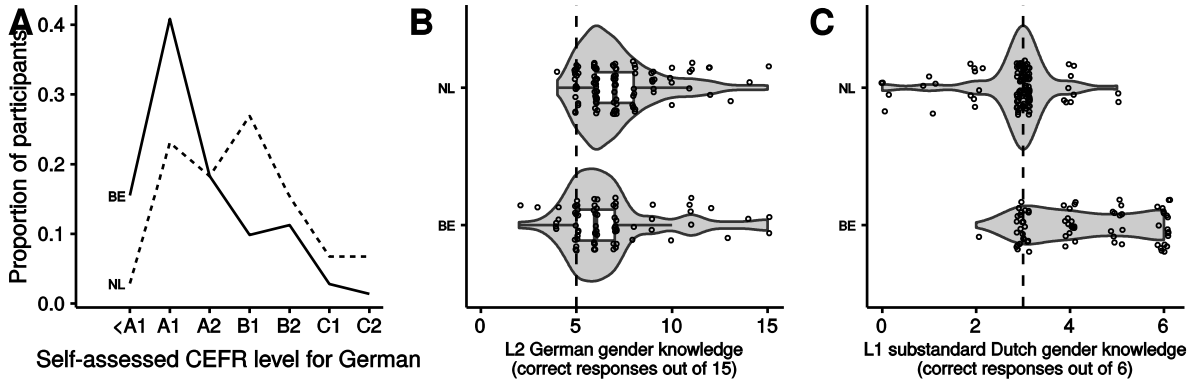

Figure 2. German skills and gender knowledge in Belgian (BE) and Dutch (NL) participants. (A) The proportion of Belgian and Dutch participants per self-assessed conversational ability level in German. (B) The number of correct gender assignments to German stimuli with neuter Dutch cognates (individual participants, kernel density, and boxplot). (C) The number of correct responses on substandard Southern Dutch NPs in the 'perceived use' task (individual participants and kernel density). The dashed vertical lines in panels B and C indicate chance levels.

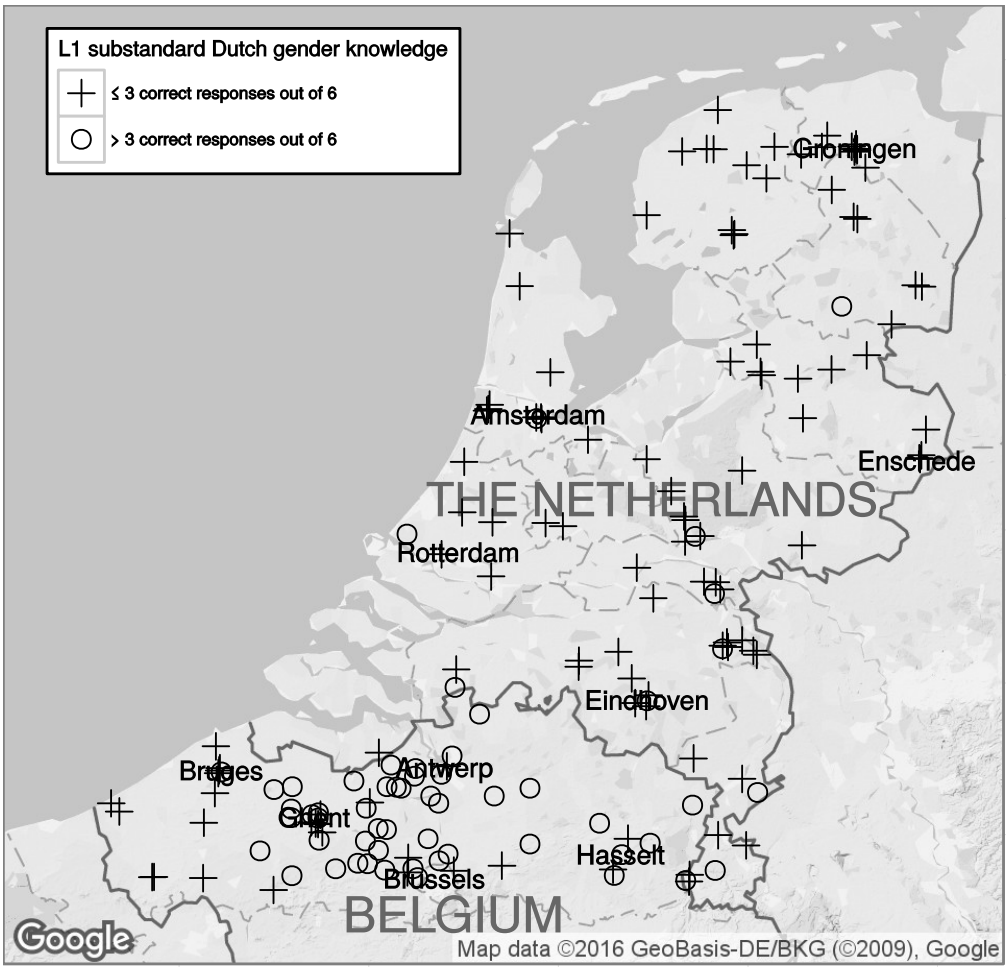

Figure 3: Knowledge of substandard Southern Dutch gender according to where the participants grew up. Participants with four or more correct responses (out of six) on substandard Southern Dutch NPs in the 'perceived use' task are plotted as circles, the others as crosses. The position of the symbols was slightly jittered to reduce the amount of overlap between participants who grew up in the same town. Note that, within Dutch-speaking Belgium, it is particularly in the province of West-Flanders (around Bruges) that participants provided relatively few correct responses to substandard Southern Dutch NPs.

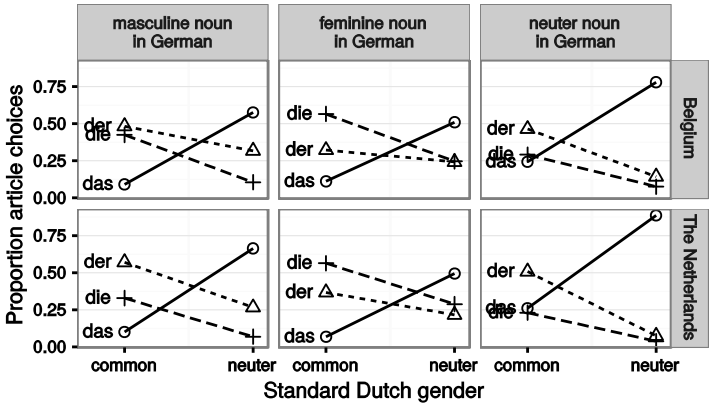

Figure 4: The proportion of masculine (*der*), feminine (*die*) and neuter (*das*) L2 German article choices by Belgian (top row) and Dutch participants (bottom row) according to the nouns' correct German article and their cognates' gender in Standard Dutch. Across the board, participants chose neuter *das* more often if the German nouns had neuter cognates in Standard Dutch.

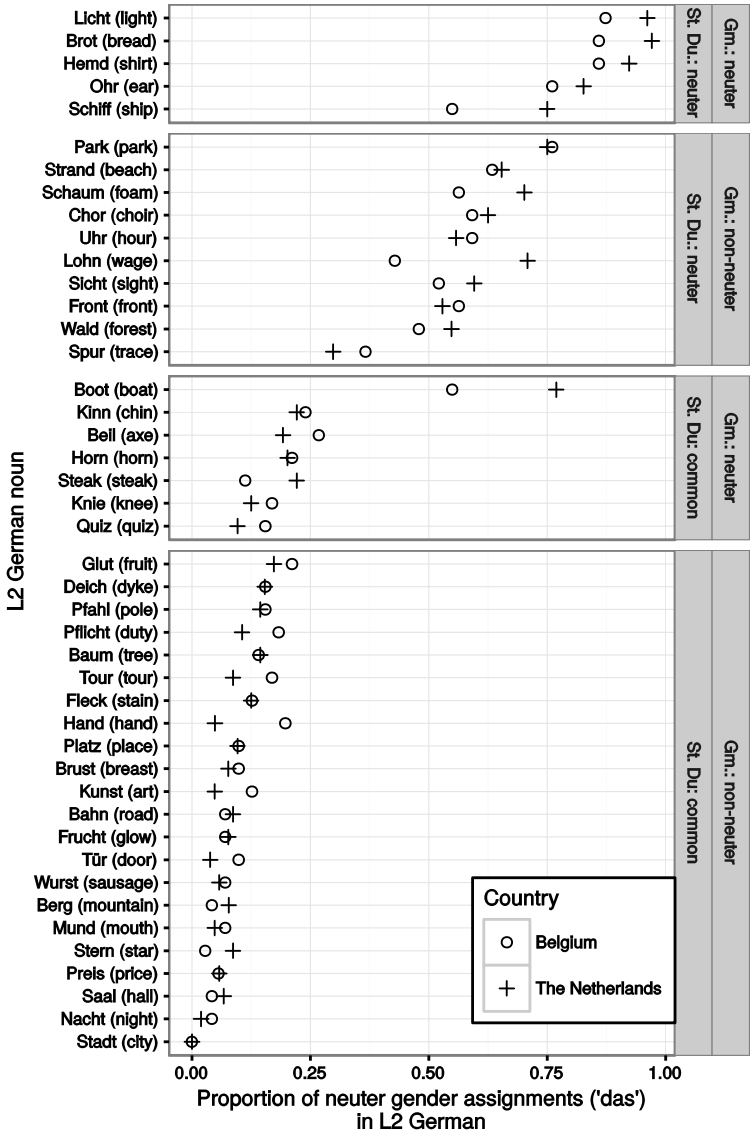

Figure 5: The proportion of neuter L2 German article choices (*das*) by Belgian and Dutch participants for each German noun. The nouns are split up by their German (Gm.) gender and their cognates' Standard Dutch (St. Du.) gender.

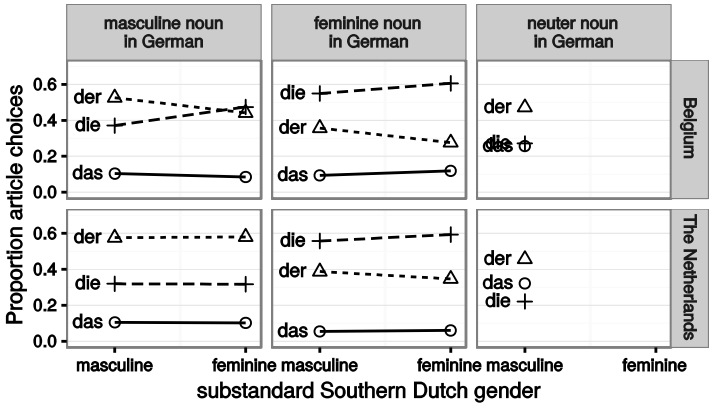

Figure 6: The proportion of masculine (*der*), feminine (*die*) and neuter (*das*) L2 German article choices by Belgian (top row) and Dutch participants (bottom row) according to the nouns' correct German gender and their cognates' substandard Southern Dutch gender. The L2 gender assignment task did not feature any neuter German nouns with feminine substandard Southern Dutch cognates, which is why the panels on the right only show proportions for neuter German nouns whose cognates are masculine in substandard Southern Dutch.

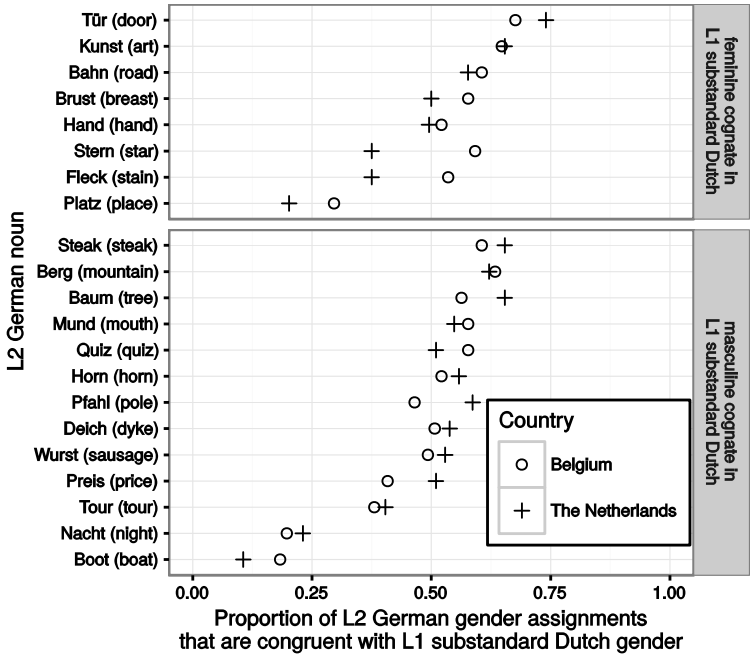

Figure 7: For each relevant L2 German noun, the proportion of L2 German article choices that are congruent with the cognates' gender in substandard Southern Dutch. The top panel shows the German nouns that have feminine cognates; for these, feminine *die* is the congruent article choice. The bottom panel shows the German nouns that have masculine cognates; for these, masculine *der* is the congruent article choice. The proportion of congruent responses is plotted for both Belgian (circles) and Dutch participants (crosses); if the circles lie to the right of the crosses, Belgians provided more congruent responses to the noun in question.

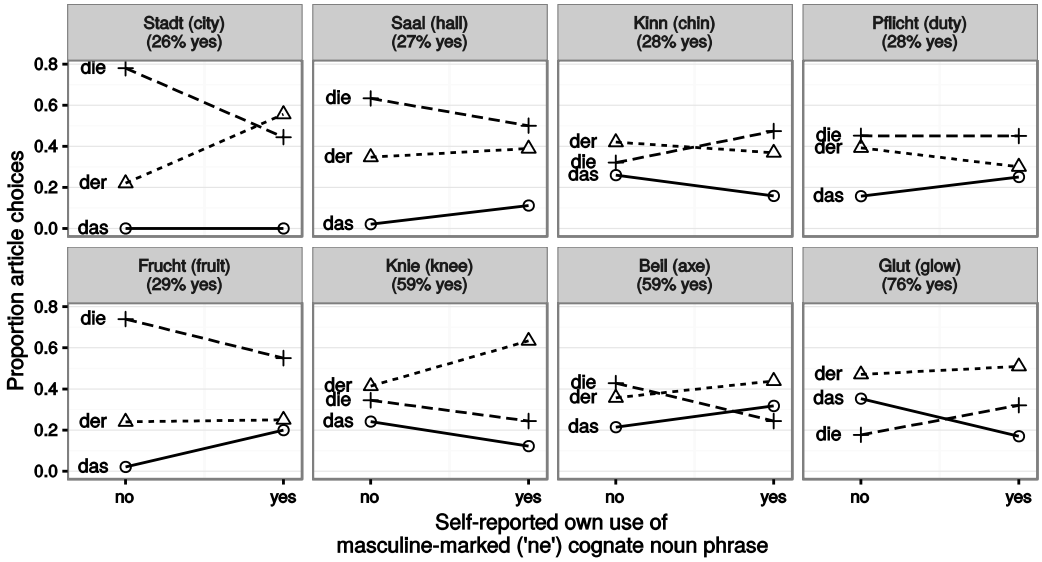

Figure 8: The proportion of masculine (*der*), feminine (*die*) and neuter (*das*) L2 German article choices by Belgian participants for all eight L2 German nouns whose cognates' gender in substandard Southern Dutch was either unknown or varied substantially between informants according to whether the participants reported to use the masculine-marked cognate NP (e.g., *ne stad* for *Stadt* 'city') themselves.

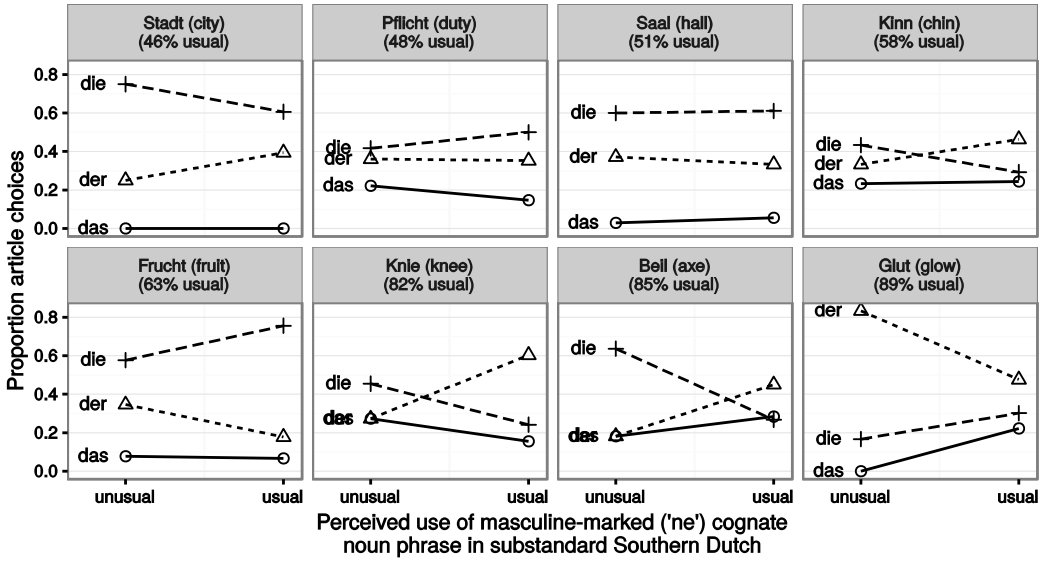

Figure 9: The proportion of masculine (*der*), feminine (*die*) and neuter (*das*) L2 German article choices by Belgian participants for all eight L2 German nouns whose cognates' gender in substandard Southern Dutch was either unknown or varied substantially between informants according to whether the participants perceived the masculine-marked cognate NP (e.g., *ne stad* for *Stadt* 'city') to be usual in colloquial Southern Dutch usage.

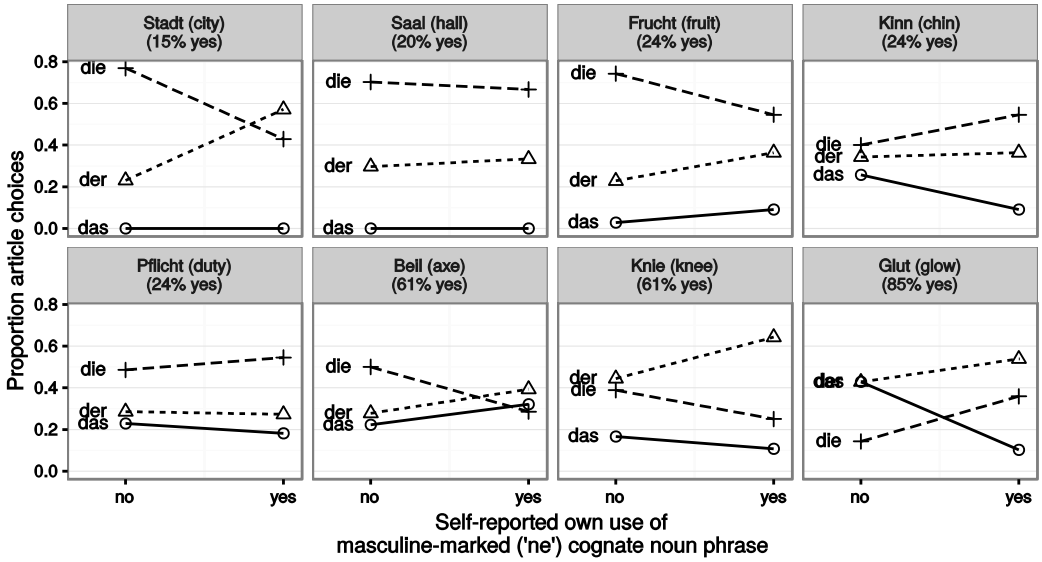

Figure 10: The proportion of masculine (*der*), feminine (*die*) and neuter (*das*) L2 German article choices by Belgian participants for all eight L2 German nouns whose cognates' gender in substandard Southern Dutch was either unknown or varied substantially between informants according to whether the participants reported to use the masculine-marked cognate NP (e.g., *ne stad* for *Stadt* 'city') themselves. Only responses by the 46 Belgian participants with four or more correct responses (out of 6) on the L1 substandard Southern Dutch gender test are included in this figure.